

Introduction: Target Organ Toxicity

by R. L. Dixon*

The Society of Toxicology and The National Institute of Environmental Health Sciences, recognizing the need for periodic review of the methods used in the assessment of chemically-induced toxicity, are co-sponsoring a series of symposia on Target Organ Toxicity. Participating scientists, having expertise relevant to various organs and tissues, (1) review the morphology, physiology, and biochemistry; (2) describe means routinely used to assess toxicity and their reliability; (3) evaluate the utility of tests for the assessment of hazard; and (4) propose the application of recent advances in basic science to the development of practical test procedures. This activity is being coordinated by Drs. Joseph F. Borzelleca, Robert L. Dixon, and Perry J. Gehring.

The first symposium considered the hepatobiliary and renal systems and was organized by Drs. Gabriel L. Plaa and Jerry B. Hook. The second meeting was organized by Dr. Hans Peter Witschi and Robert T. Drew and focused on the lung. The third

meeting concerned mammalian development and was organized by Dr. Robert L. Dixon. The fourth meeting concerned reproductive and genetic toxicity and was organized by Dr. Robert L. Dixon and Raymond D. Harbison.

This meeting considers the nervous system, with special emphasis on the assessment of potential and unidentified hazards to behavioral and neurological processes, and was organized by Drs. Clifford Mitchell, Terri Damstra, Victor Laties, Lawrence Reiter, and Peter Spencer. Attention was directed to both ethological and operant approaches to behavioral toxicology; neurological and neuropathological procedures; and the role of neurochemistry in detecting and predicting neurotoxic effects. Special emphasis was placed on the predictiveness and limitations of the various test methods. The subject of behavioral teratology, while of interest to the participants, was not specifically discussed since it was one of the topics covered in a previous symposium on mammalian development.

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